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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,485	12/20/2000	Richard G. Morton	2000-00871-1	9464

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ALBERT P. CEFALO AND WILLIAM CRAY  
CYMER, INC. LEGAL DEPT. MS/4-2C  
17075 THORN MINT COURT  
SAN DIEGO, CA 92127

EXAMINER

MONBLEAU, DAVIENNE N

ART UNIT PAPER NUMBER

2878

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

GA

**Office Action Summary**

Application No.

09/742,485

Applicant(s)

MORTON, RICHARD G.

Examiner

Davienne Monbleau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 18-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Response to Amendment***

The amendment filed on 10/20/03 has been entered. Claim 1 has been amended. New claims 18-22 have been added. Claims 1-11 and 18-22 are pending.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meller et al. (U.S. Patent No. 5,729,565) in view of Wiedemann et al. (U.S. Patent No. 4,742,527). Regarding Claim 1, Meller et al. teach in Figure 1 an excimer laser comprising a laser chamber (10) containing a laser gas and an electrode set (14 and 16). Meller et al. further teach in column 4 lines 16-17 that said laser gas comprises fluorine and in column 2 lines 27-29 that electrodes may be of a copper alloy material. It is known in the art that said excimer laser comprises an anode, a cathode, a pulse power system to create the electrical pulses across said electrode set, and circulating means (see Meller et al. column 4 lines 16-18). Meller et al. do not teach that said electrodes are annealed. Wiedemann et al. teach in column 2 lines 28-32 annealing said electrodes. It would have been obvious to one of ordinary skill in the art at the time of the invention to anneal said electrodes in Meller et al., to reduce internal stresses.

Regarding Claim 18, see discussion on Claim 1 above. The phrase "each of which is annealed ... cathode and anode" is not given patentable weight because it reads on a method that does not further limit the structure of the apparatus.

Regarding Claims 19-22, see discussion on Claim 18 above. The product-by-process portion of these claims do not further limit the apparatus of the base claim and thus are not given patentable weight.

Claims 2-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meller et al. (U.S. Patent No. 5,729,565) in view of Wiedemann et al. (U.S. Patent No. 4,742,527), as applied to claim 1 above, and further in view of Baumler et al. (U.S. Patent No. 4,860,300). Regarding Claims 2-4, Meller et al. do not teach electrodes comprising copper, aluminum, iron and nickel. Baumler et al. teach in column 2 lines 29-46 that electrodes may comprise copper, aluminum, nickel and iron. It would have been obvious to one of ordinary skill in the art at the time of the invention to use any or all of these electrode materials in Meller et al., as taught by Baumler, as they are known electrode materials. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine the optimum composition of the electrodes to improve the lasing efficiency and lifetime of the electrodes.

Regarding Claims 5-7, Meller et al. do not teach that said electrodes comprise zinc. Baumler et al. teach in column 2 lines 45-46 that the copper alloy of an electrode may comprise zinc. It would have been obvious to one of ordinary skill in the art at the time of the invention to use zinc in Meller et al., as taught by Baumler, as it is a known electrode material. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine the optimum composition of the electrodes to improve the lasing efficiency and

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lifetime of the electrodes.

Regarding Claims 8-11, Meller et al. do not teach that said electrodes comprise zinc and lead. Baumler et al. teach in column 2 lines 45-46 that the copper alloy of an electrode may comprise zinc and other materials. It would have been obvious to one of ordinary skill in the art at the time of the invention to use any or all of these electrode materials in Meller et al., as taught by Baumler, as they are known electrode materials. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine the optimum composition of the electrodes to improve the lasing efficiency and lifetime of the electrodes.

#### *Response to Arguments*

Applicant's arguments filed 10/20/03 have been fully considered but they are not persuasive.

The Applicant argues that Weidemann is non-analogous art. Examiner disagrees because although Weidemann reads on a gas ion laser, it still reads on an electrode structure for a gas laser. Even though electrodes in gas ion lasers may be exposed to different conditions, in both types of lasers improving the lifetime of the electrodes is essential for long-lasting and efficient lasing. Furthermore, Weidemann teaches annealing the anode for part of the same purpose mentioned by the Applicant: to minimize internal stresses of the anode. This will in turn will minimize surface stress. Thus, the Weidemann is analogous art.

The Applicant argues that Weidemann does not teach an electrode that is machined and then annealed. Regarding Claim 1, this is not persuasive because the language does not specify the order of machining and annealing. Furthermore, regarding both Claims 1 and 18, since these are apparatus claims and the annealing and machining are drawn towards the method of making

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the anode, and the method which was used to make the anode is not observable from the final apparatus device, this portion is not given as much patentable weight. Therefore, since Weidemann teaches annealing electrodes and machining is a commonly used for producing electrodes, Meller et al. in view of Weidemann reads on the limitations. Additionally, the process for making an electrode was originally restricted out in the office action dated 9/25/02 because it is in fact a separate invention.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davienne Monbleau whose telephone number is 703-306-5803. (Note: as of January 20, 2004, the examiner's telephone number will be 571-272-1945). The examiner can normally be reached on Mon-Fri 9:00 am to 5:00 pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 703-308-4852. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

*Danielle Monbleau*

DNM

  
**DAVID PORTA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**